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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,542	06/08/2007	Max Aebi	001227/0208	3676

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EXAMINER	
SCHAPER, MICHAEL T	
ART UNIT	PAPER NUMBER
3775	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/538,542	AEBI ET AL.	
	Examiner	Art Unit	
	MICHAEL T. SCHAPER	3775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 April 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5,9,10,12-18 and 21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5,9,10,12-18 and 21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12 Apr 2010 has been entered.

Response to Arguments

Applicant's arguments with respect to all current claims have been considered but are moot in view of the new ground(s) of rejection.

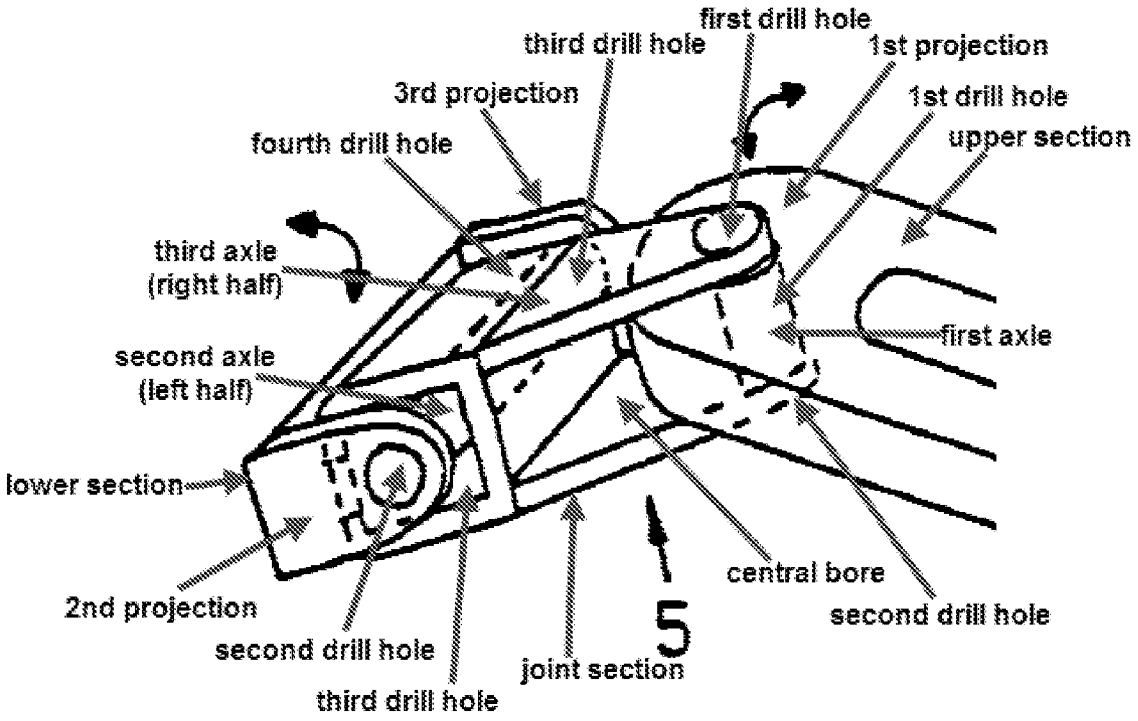
Applicant's arguments filed 12 Apr 2010 have been fully considered but they are not persuasive. As to Applicant's argument that it would not be obvious for the mop connection to be used in the current combination, Examiner notes that the obviousness modification was merely a change in joint / connection mechanism, and thus the obviousness claim is still upheld.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 5, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferree (US 2004/0106998) in view of Stranders (US 5333347) further in view of Eisermann et al. (US 2003/0208273).



Ferree discloses an intervertebral implant comprising a central axis, an upper section (104), suitable for laying onto a base plate of a vertebral body lying above, and a lower section (104') suitable for laying onto a cover plate of a vertebral body lying below, wherein the upper section has a ventral side area, a dorsal side area, two lateral side areas, a top apposition surface, a bottom surface (see FIG. 1); the lower section has a ventral side area, a dorsal side area, two lateral side areas, a bottom apposition

surface, a top surface (see FIG. 1), the upper and lower sections being connected by a universal joint (102).

Ferree discloses the claimed invention except for the upper section having a first projection extending from the bottom surface, the first projection including a first drill hole, the ventral side area including a first depression; the lower section having second and third projections extending from the top surface, the second and third projections including second and third drill holes, respectively, the ventral side area including a second depression; and a frame shaped, central joint section located between the upper and lower sections so that the upper section is moveable with respect to the lower section, the central joint section including a central bore and first, second, third and fourth drill holes, the first projection extending from the bottom surface of the upper section being receivable within the central bore formed in the central joint section, the central joint section being receivable between the second and third projections extending from the top surface of the lower section so that a first axle is receivable in the first and second drill holes formed in the central joint section and the first drill hole formed in the first projection, a second axle is receivable in the third drill hole formed in the central joint section and the second drill hole formed in the second projection and a third axle is receivable in the fourth drill hole formed in the central joint section and the third drill hole formed in the third projection; and a removable insert for causing temporary blocking movement of the upper and lower sections, the insert including a lower end and an upper end, the upper end being receivable in the first depression, the lower end being receivable in the second depression; wherein the insert maintains the

upper and lower sections, measured at their ventral side areas, at a fixed distance from each other; wherein the first and second depressions are dovetail guides and the upper and lower ends on the insert are arranged complementary to these dovetail guides; wherein the dovetail guides are tapered from the ventral side areas towards the dorsal side areas; wherein the insert can be attached to one of the upper and lower sections by a screw.

Stranders discloses a universal joint (see examiner-annotated FIG. 2 above) wherein the upper section having a first projection extending from the bottom surface, the first projection including a first drill hole; the lower section having second and third projections extending from the top surface, the second and third projections including second and third drill holes, respectively; and a frame shaped, central joint section located between the upper and lower sections so that the upper section is moveable with respect to the lower section, the central joint section including a central bore and first, second, third and fourth drill holes, the first projection extending from the bottom surface of the upper section being receivable within the central bore formed in the central joint section, the central joint section being receivable between the second and third projections extending from the top surface of the lower section so that a first axle is receivable in the first and second drill holes formed in the central joint section and the first drill hole formed in the first projection, a second axle is receivable in the third drill hole formed in the central joint section and the second drill hole formed in the second projection and a third axle, integral with the second axle, is receivable in the fourth drill

hole formed in the central joint section and the third drill hole formed in the third projection.

Eisermann discloses a removable insert (surg inst ¶37) for causing temporary blocking movement of the upper and lower sections, the ventral side areas of the upper and lowers sections including a first and second depression (prox 57 of 32 / 34), the insert including a lower end and an upper end (inherently), the upper end being receivable in the first depression, the lower end being receivable in the second depression; wherein the insert maintains the upper and lower sections, measured at their ventral side areas, at a fixed distance from each other (¶37); wherein the insert can be, *i.e.* is capable of being, attached to one of the upper and lower sections by a screw for providing a stable lordotic angle during insertion (¶37).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to have modified the device of Ferree with a universal joint wherein the upper section having a first projection extending from the bottom surface, the first projection including a first drill hole; the lower section having second and third projections extending from the top surface, the second and third projections including second and third drill holes, respectively; and a frame shaped, central joint section located between the upper and lower sections so that the upper section is moveable with respect to the lower section, the central joint section including a central bore and first, second, third and fourth drill holes, the first projection extending from the bottom surface of the upper section being receivable within the central bore formed in the central joint section, the central joint section being receivable between the second and third projections

extending from the top surface of the lower section so that a first axle is receivable in the first and second drill holes formed in the central joint section and the first drill hole formed in the first projection, a second axle is receivable in the third drill hole formed in the central joint section and the second drill hole formed in the second projection and a third axle is receivable in the fourth drill hole formed in the central joint section and the third drill hole formed in the third projection because the Examiner is taking the position that the universal joint of Ferree and the universal joint as taught by Stranders are equivalent for their use in the joints and connections art and the selection of any of these known equivalents to join or connect these two parts would be within the level of ordinary skill in the art; furthermore, it would have been obvious to a person of ordinary skill in the art to have modified the device of Ferree with a removable insert for causing temporary blocking movement of the upper and lower sections, the ventral side areas of the upper and lowers sections including a first and second depression, the insert including a lower end and an upper end, the upper end being receivable in the first depression, the lower end being receivable in the second depression; wherein the insert maintains the upper and lower sections, measured at their ventral side areas, at a fixed distance from each other; wherein the insert can be attached to one of the upper and lower sections by a screw in view of Eisermann for providing a stable lordotic angle during insertion.

Furthermore, Ferree, Stranders, and Eisermann disclose the claimed invention except for the second and third axles to be separate. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have separated

them into 2 distinct pieces, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman, 168 USPQ 177, 179.*

Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferree (US 2004/0106998) in view of Stranders (US 5333347) further in view of Eisermann et al. (US 2003/0208273) further in view of Lutz (US 5762410).

Ferree, Stranders, and Eisermann disclose the claimed invention except for the connection between the insert and the two sections being dovetails; wherein the dovetail guides are tapered from the ventral side areas towards the dorsal side areas.

Lutz discloses a connection mechanism wherein the first and second depressions are dovetail guides (see FIGS. 3-4) and the upper and lower ends on the insert are arranged complementary to these dovetail guides (see FIGS. 3-4); wherein the dovetail guides are tapered from the ventral side areas towards the dorsal side areas (see FIG. 4) for a secure connection mechanism.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to have modified the device of Ferree, Stranders, and Eisermann with a connection mechanism wherein the first and second depressions are dovetail guides and the upper and lower ends on the insert are arranged complementary to these dovetail guides; wherein the dovetail guides are tapered from the ventral side areas towards the dorsal side areas in view of Lutz for a secure connection mechanism.

Claims 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferree (US 2004/0106998) in view of Stranders (US 5333347) further in view of Eisermann et al. (US 2003/0208273) further in view of Michelson (US 2002/0052656 from IDS).

Ferree, Stranders, and Eisermann disclose the claimed invention except for wherein the upper and the lower sections each comprise at least two drill holes running through from the ventral side areas to the apposition surfaces with longitudinal axes for receiving bone fixation devices; wherein the longitudinal axes of the drill holes make an angle γ with the central axis; wherein the angle γ lies in a range between 20° and 65°; wherein the longitudinal axes of the drill holes as seen from the ventral side areas diverge from the inner surfaces against the apposition surfaces; wherein the drill holes are conically tapered towards the apposition surfaces; wherein the drill holes have an internal thread.

Michelson discloses an intervertebral implant (see FIGS. 42-49) wherein the upper and the lower sections each comprise at least two drill holes (see FIG. 42) running through from the ventral side areas to the apposition surfaces (see FIG. 45) with longitudinal axes for receiving bone fixation devices; wherein the longitudinal axes of the drill holes make an angle γ with the central axis (inherent, see FIG. 45); wherein the angle γ lies in a range between 20° and 65° (angle, from FIG. 45 appears to be ~45°); wherein the longitudinal axes of the drill holes as seen from the ventral side areas diverge from the inner surfaces against the apposition surfaces (see FIG. 43); wherein the drill holes are conically tapered towards the apposition surfaces (implied,

see FIG. 46 in view of FIG. 49); wherein the drill holes have an internal thread (see FIG. 46) for securedly fastening the implant to the vertebral bodies ([0157]).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to have modified the device of Ferree, Stranders, and Eisermann with an implant wherein the upper and the lower sections each comprise at least two drill holes running through from the ventral side areas to the apposition surfaces with longitudinal axes for receiving bone fixation devices; wherein the longitudinal axes of the drill holes make an angle γ with the central axis; wherein the angle γ lies in a range between 20° and 65°; wherein the longitudinal axes of the drill holes as seen from the ventral side areas diverge from the inner surfaces against the apposition surfaces; wherein the drill holes are conically tapered towards the apposition surfaces; wherein the drill holes have an internal thread in view of Michelson for securedly fastening the implant to the vertebral bodies.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL T. SCHAPER whose telephone number is (571)270-7413. The examiner can normally be reached on M-F, 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Barrett can be reached on (571)272-4746. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. T. S./
Examiner, Art Unit 3775

/Thomas C. Barrett/
Supervisory Patent Examiner, Art Unit 3775